

## **Sign evolution on multiple time scales. Introductory comments**

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This thematic issue explores aspects of sign emergence, development and change. Rather than static entities, signs are approached as dynamic relations that grow, develop and change over time in response to various environmental, cognitive, social or biological factors. The individual contributions to the issue each approach processes of sign evolution, however, from the perspectives of quite different time scales, semiotic contexts, and theoretical foundations. The papers all originate from a recent conference: The Eighth Conference of the Nordic Association for Semiotic Studies (NASS) “Sign Evolution On Multiple Time Scales”, hosted by the Center for Semiotics at Aarhus University, 29–31 May 2013. The theme of the conference, coinciding with this thematic issue, brought together perspectives and topics from a wide variety of fields and disciplines within semiotic studies. The central questions addressed the emergence of new signs and sign systems (such as codes, notational systems, verbal and sign languages, gesture, graphic symbols, etc.) and their change over time. Contributions spanned across different levels of semiotic analysis: from biological, cultural, cognitive, phenomenological, as well as multi-level and emergent perspectives – addressing a myriad of features, mechanisms and communicational contexts. The articles included in this special issue are but a small, although representative, sample of the diversity represented at NASS 2013.

Taking as a starting point Charles Sanders Peirce’s semiotic theory, Winfried Nöth’s paper “The growth of signs” discusses the fundamental logical mechanisms whereby semiotic signs evolve, grow, develop, and with them the knowledge which they reveal about the world. Nöth makes a convincing case for the way in which signs (in particular symbols) grow essentially through the generation of interpretants and compares the Peircean evolutionary view of semiosis with those of other thinkers (e.g. Millikan, Deacon, and Dawkins).

In his paper “Conceptual change and development on multiple time scales: From incremental evolution to origins”, Joel Parthemore also addresses some of the fundamental mechanisms of conceptual change, however, focussing on a number of distinct time scales from the day-to-day life of an individual to the lifetime of society

and the human species itself. Contesting the idea that concepts are inherently stable, Parthemore follows ideas from the *enactive* tradition in philosophy and claims that concepts are in a state of continuous change to comply with the dynamic contexts of experience and use.

After these more general perspectives, other papers focus on specific time scales of sign evolution. In his paper “The textuality of diagonal ornamentation: Historical transformations of signification from the Baltic perspective”, Vytautas Tumenas analyses temporal developments in a particular cultural practice evidenced in textile ornaments of traditional Baltic costumes. Features of particular geometric patterns in the textiles are closely interwoven with folkloristic narratives that come to play a constituting role in the formation of a Baltic national identity. Another example of a semiotic practice evolving on a cultural historical time scale is presented by Marilyn Mitchell in her contribution “Fitting issues: The visual representation of time in family tree diagrams”. The study delineates the fascinating history of the visual representation of family trees as an evolving complex sign system. With rich examples and illustrations, Mitchell builds a theoretical framework to trace the logical mechanisms in the evolution of family mapping practices from the eighth century to our days.

While such cultural developments span centuries – if not millennia – other processes of sign evolution are observed at the comparatively shorter time scale of human ontogeny. In his paper “The ontogeny of the embryonic, fetal and infant human *umwelt*”, Morten Tønnessen applies *umwelt* theory to characterize the emergence and the major transitions of the human *umwelt* in the developmental pathway from the embryo to the fetus and child. Such ontogenetic trajectory implies a radical increase in the complexity of the *umwelt* on the one hand, and a basic transition from critical dependence on social others to functional independence on the other hand.

On an even shorter time scale, Maria Restrepo, in her paper “Graphic design production: a sign itself”, considers the “ontogeny” of composite graphic designs. Rather than simply a visualization tool, Restrepo discusses how the graphic design process can be approached as a genuine semiotic process synthesizing iconic and symbolic elements into hybrid signs transcending similarity relations and linguistic meanings with important cognitive implications.

While Restrepo investigates semiosis from the perspective of sign production, Gisela Bruche-Schulz in her paper “Where semiosis begins when reading a text: On event perception”, studies processes of semiosis from the perspective of text comprehension. Applying a novel method resembling ‘think-aloud’ protocols, Bruche-Schulz investigates general and culture-specific patterns in the associative construal of meaning in five culturally different samples reading excerpts from *Le Petit Prince*. Methodological considerations also form the main topic in Luis Emilio Bruni and

Sarune Baceviciute's article "On the embedded cognition of non-verbal narratives". The authors stress the need for a research agenda that can theoretically and empirically deal with multimodal narrative representations which are becoming increasingly more relevant in the realm of digital culture. They envision that the newest developments in, and the relations between, biosemiotics and cognitive semiotics have a lot to offer in this regard by linking the different semiotic levels of "narrative cognition".

While these latter contributions concern more permanent media of expression (graphics, text and digital media), other semiotic practices unfold through continuous negotiation of perspectives and signs in real-time coordination and interaction. In her article "The role of trust in binding the perspectives of guide dogs and their visually impaired handlers", Riin Magnus explores the cooperation of guide dogs and their visually impaired handlers as a coordination of individual perspectives. The gradual emergence of a double perspective is found to depend on trust between the individuals (dog and impaired handler) that might require the establishment of a shared communication system grounded in dialogical interaction.

Together, the nine contributions making up this thematic issue of *Sign Systems Studies* are united in their attempt to approach a number of diverse topics – from textile ornaments to human-dog interactions – from a semiotic perspective. Despite obvious methodological, theoretical and thematic differences, all the papers thus concern aspects of sign emergence and change although on very different time scales. Like few other theoretical frameworks, a semiotic approach here allow us to appreciate some of the general processes, mechanisms and relations that transcend meaning making across scales, times and practices and investigate their possible dynamics and interdependencies. Enjoy the reading.